AMENDMENTS

IN THE CLAIMS:

Please cancel claims 40-48 (as renumbered).

1-27. (Canceled)

28. (Previously added) A transgenic rat whose genome comprises a first stably integrated transgenic nucleotide sequence encoding a human CD4, a second stably integrated transgenic nucleotide sequence encoding a human chemokine receptor and a third stably integrated transgenic nucleotide sequence encoding a polypeptide that interacts with an HIV sequence;

wherein the first, second and third transgenes are operably linked to a promoter to be preferentially expressed which results in HIV adhesion and infection of T-cells and/or macrophages.

29. (Previously added) The transgenic rat of claim 28, wherein the polypeptide encoded by the third transgene that interacts with an HIV sequence is a subunit of human elongation factor P-TEFb.

~~31~~30. (Previously added) The transgenic rat of claim 28, wherein the polypeptide encoded by the third transgene that interacts with an HIV sequence is Cyclin T.

~~32~~31. (Previously added) The transgenic rat of claim 28, wherein the rat is homozygous for human CD4.

~~33~~32. (Previously added) The transgenic rat of claim 28, wherein the rat is homozygous for a human chemokine receptor.

~~34~~33. (Previously added) The transgenic rat of claim 28, wherein the chemokine receptor is selected from the group consisting of: CCR3, CCR5, CCR2B, CXCR4, CXR3, CCR8, GPR15, STRL33, APJ, and LTB_4.

~~35~~34. (Currently Amended) The transgenic rat of claim ~~34~~ 33, wherein the chemokine receptor is CCR5.

~~36~~35. (Previously added) The transgenic rat of claim 29, wherein the chemokine receptor is CCR5.

~~37~~36. (Currently amended) The transgenic rat of claim ~~30~~ 28, wherein the chemokine receptor is CCR5.

~~38~~37. (Previously added) An isolated cell derived from the rat of Claim 28, wherein said isolated cell expresses said transgenes.

~~39~~38. (Currently amended) The transgenic rat of claim ~~34~~ 33, wherein the third transgene encodes a subunit of human elongation factor P-TEFb.

~~40~~39. (Currently amended) The transgenic rat of claim ~~34~~ 33, wherein the third transgene encodes Cyclin T.

~~41~~40. (Cancelled)

~~42~~41. (Cancelled)

~~43~~42. (Cancelled)

~~44~~43. (Cancelled)

~~45~~44. (Cancelled)

~~46~~45. (Cancelled)

~~47~~46. (Cancelled)

~~48~~47. (Cancelled)

~~49~~48. (Cancelled)

~~50~~49. (Previously added) The transgenic rat of claim 29, wherein the chemokine receptor is CXCR4.

~~51~~50. (Currently amended) The transgenic rat of claim ~~30~~ 28, wherein the chemokine receptor is CXCR4.

~~52~~51. (Currently amended) An isolated rat cell of claim ~~38~~ 37, wherein second stably integrated nucleotide sequence encodes a human CCR5 chemokine receptor.

~~53~~52. (Currently amended) An isolated rat cell of claim ~~38~~ 37, wherein second stably integrated nucleotide sequence encodes a human CXCR4 chemokine receptor.

~~54~~53. (Previously added) A method of producing a transgenic rat, comprising:

transforming a cell comprising a vector, the vector comprising a first transgene encoding a human CD4, a second transgene encoding a human chemokine receptor and a third transgene encoding a polypeptide that interacts with a HIV sequence, wherein the first, second and third transgenes are operably linked to a promoter;

introducing the transformed cell into a blastocoel of a blastocyst;

positioning the modified blastocyst into a uterine horn of a pesudopregnant female rodent; and

allowing the female rodent to go to term, wherein offspring of the female rodent are screened for having the three transgenes.

~~55~~54. (Currently amended) A method of claim ~~54~~ 53, wherein the second transgene encoding a human chemokine receptor is CCR5 and the third transgene is Cyclin T.